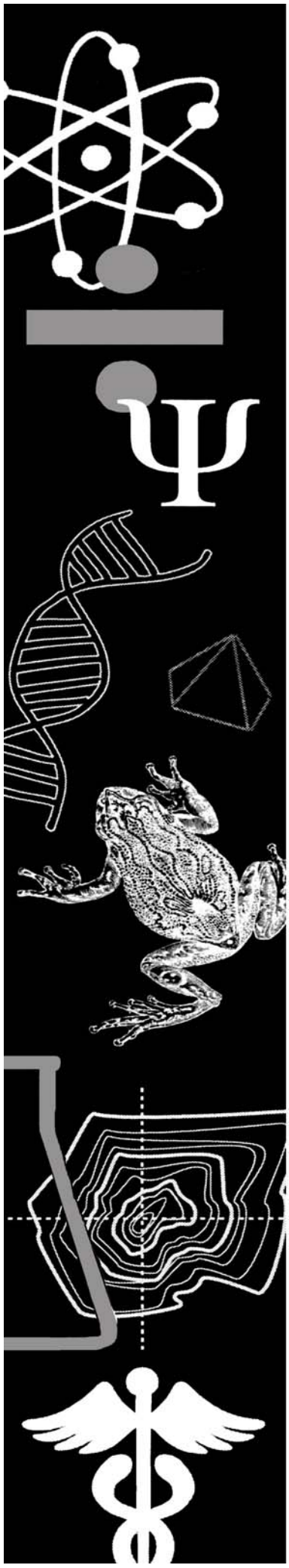

Earth Science

OREGON STATE UNIVERSITY
COLLEGE OF SCIENCE

...our planet and its interacting systems

Earth Science is the study of all aspects of our planet, including the solid earth (soil and rock), water (fresh water and marine), atmosphere, and their interactions with living systems. Each aspect of the Earth interacts with the others in fascinating and important ways, and the study of these interactions is increasingly important to our society. For example, a good understanding of how chemicals such as carbon dioxide move through the Earth's various systems requires knowledge of all parts of Earth Science.

The Earth Science program in the Department of Geosciences offers the BS degree with a general program of study across the Earth sciences. Majors take classes in Geosciences as well as classes in several allied units at OSU, including Crop and Soil Science and the College of Oceanography and Atmospheric Sciences. Faculty in these units work on the entire spectrum of Earth Science, and in collaboration make OSU one of the best places in the world to study in this field. Students who excel in their studies may arrange to work on a research project through individual study with a faculty member.

Career Opportunities

Earth Scientists are needed as researchers to understand complex cycling of chemicals such as carbon, nitrogen and water. Earth Scientists with broad knowledge of the Earth are needed in education to teach children about the world we live in and to motivate them in all of science by using the most exciting and accessible of all laboratories – the outdoors. Scientists are needed as interpreters in national parks, museums, and other places where the public learns about the Earth. Furthermore, the Earth Science may be applied to a range of other career choices requiring a general knowledge of science.

Four specializations are incorporated into the Earth Science degree as options, based on career opportunities . Students select one of the following options:

1. **Earth System Science:** Provides students with broad training for advanced work in the emerging discipline of Earth System Science. Students with this degree may decide to go on to study at the graduate level in a variety of disciplines.

2. **Earth Science Education:** Trains students so that they may teach Earth Science in K-12 schools and other science or math courses in grades 5 through 9. Initial licensure will be achievable with this option and completion of the MS in Math and Science Education, which typically takes an additional.

3. **Public Interpretation:** Students gain the skills needed to interact and teach the public about Earth Science in settings such as local, state, and national parks, nature preserves, and museums. Students completing this option may achieve certification through the National Association for Interpretation.

4. **Applied Earth Science:** Focuses on application of Earth Science techniques to a related field of study. Earth Science techniques include geographic information systems (GIS), cartography, remote sensing and environmental assessment. Students receive training through a minor in a related field such as biology, environmental engineering, fisheries and wildlife, or military science where these techniques are applied. This option is recommended for students in ROTC.

Course of Study

Students begin the freshman year with a year-long sequence in basic Earth Science, in addition to chemistry and mathematics. The sophomore year includes additional courses in Earth Sciences and physics.

Students focus on their Option during the last two years, and complete upper division courses in Earth Science a capstone experience. All students are encouraged to take as many discipline-specific 400-level electives as possible. Requirements for graduation include 48 credits needed for the Baccalaureate Core, consisting of writing/speech (9 cr), mathematics (3 cr), fitness (3 cr), physical and biological sciences (12 cr), western culture/cultural diversity/literature & arts/social processes/difference, power, and discrimination (15 cr), and contemporary global issues/science, technology and society (6 cr).

Earth Science Curriculum (BS Degree)

Freshman and Sophomore Years	Credits
Physical Geology (GEO 201)	4
Earth System Science (GEO 202)	4
Evolution of Planet Earth (GEO 203) or alternative	3-4
Math & Stats (MTH 112, 251; ST 351; MTH 252 or ST 352)	16
Chemistry (CH 121, 122 or CH 221, 222)	10
Physics (PH 201, 202 or PH 211, 212)	8-10
Writing I & II (WR 121, 122)	6
Writing III/Speech	3
Lifetime Fitness for Health	3
Perspectives	9

Sophomore and Junior Years	Credits
Biological Science with Lab. (BI 211 recommended)	4
Surface Processes (GEO 322)	4
Geographic Information Systems: (GEO 265)	3
Map & Image Interpretation (GEO 301)	4
Water Science & Policy (CSS/GEO 335)	3
Oceanography (OC 331)	3
Principles of Soil Science (CSS 305)	4
Perspectives	6
Contemporary Global Issues	3

Junior and Senior Years	Credits
Upper Division Focus area	12
Earth Science Option	31-35
Geosciences Field Methods (GEO 462)	4
Professional Seminar (GEO 407)	1
Contemporary Earth Science Issues (GEO 4xx - number to be assigned)	3

OREGON STATE UNIVERSITY

What to know about Oregon State University

Head Adviser, College of Science, 128 Kidder Hall ..... (541) 737-4811

OSU Admissions, 104 Kerr Administration ..... (541) 737-4411
or 1-800-291-4192

OSU Financial Aid, 218 Kerr Administration ..... (541) 737-2241

- Student Employment
- Loans & Scholarships
- College Work Study

OSU Registrar, 102 Kerr Administration ..... (541) 737-4331

OSU Housing, 140 Arnold Center ..... (541) 737-4771

For additional information contact:

Roy Haggerty, Chief Adviser
Department of Geosciences
Earth Sciences Program
Oregon State University
104 Wilkinson Hall
Corvallis, OR 97331-5506
(541) 737-1201 E-mail: geo-info@geo.orst.edu
Web: http://terra.geo.orst.edu/

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